Mr. Thomas Howell has this year found *Carex cinnamomea*, Olney, at Grave Creek, Southwestern Oregon. This is the second known locality for the species. It was first found by Bolander (No. 6477) on the Red Mountains, Mendocino county, Cal. In some of the specimens the perigynium is minutely pubescent above the middle. The pubescence is evidently deciduous with age.

CARICES UNKNOWN TO AMERICA.

In the Preliminary Catalogue of the Plants of Lieut. Wheeler's Expedition (1874), Mr. Olney introduced the following exotic species upon specimens collected by the survey:

C. lævirostris, Blytt and Fries, upon a specimen of *C. utriculata*, Boott. (No. 1068.)

C. turfosa, Fries, upon *C. vulgaris*, Fries. (No. 1039.)

"*C. personata*, Fries," upon *C. aquatilis*, Wahl., var. *sphagnophila*, Fries. (Nos. 1037 and 1038.) Mr. Olney probably referred to *C. acuta*, L., var. *personata*, Fries.

C. alpina, Swartz, var. *nigrescens*, Anderss., upon *C. alpina*, (No. 1044.) The form referred to Andersson's variety will not fall under the character "spicis omnibus sessilibus, atrofuscis; pumila, rigidula,"—*Anderss. Cyp. Scand.*

C. sempervirens, Vill.? Carex Cat., is *C. frigida*, All.

C. obesa, All., is represented in this country only by its var. *minor*, Boott.

On a New Mimulus of a Peculiar Section of the Genus.

BY J. G. LEMMON.

Mimulus Mohavensis is the name under which I sent specimens of this interesting little plant to Prof. Gray. It is so peculiar that he was at first disposed to regard it as a new genus. But as a related species afterwards received from another source appeared to invalidate the characters relied on, he accepted the view which I had taken of it, and drew up the following character of a new section of the genus, which was needed for its reception:

"§ MIMULASTRUM. Corolla with cylindrical tube and throat included in the turgid 5-angled unequally toothed calyx, gibbous anteriorly near the base; the orifice contracted; limb rotate, refracted, almost regularly 5 cleft; lobes flabelliform-dilated, similar, except that the two posterior are slightly smaller. Character and habit of section *Eunanus*, except in the capsule, the submembranaceous valves of which are placentiferous."

Mimulus Mohavensis. Annual, a span or more high, viscidulous puberulent; leaves oblong and lanceolate, acute and mostly sessile, ½–1 in. long; flowers alternate in the axils, short-peduncled; corolla with a dark crimson eye and a pale border to the lobes, the latter numerously red-veined and glandular-ciliolate, 3–5 lines in diameter.

On sandy slopes or dry washes along the Mohave river, Cal., between Daggett and Waterman, May 10, and opposite, near Calico, May 11, 1884.

Stems erect, sometimes simple, usually branching and ascending, 2–5 inches in height; the leaves in all the specimens discovered are approximate and tinted a warm Indian red; the curious flowers peering out of the thick foliage display vivid contrasts of dark crimson center bordered with light rose, the whole disk traversed with radiating and branching veins of blood red. Generally associated in groups, these little plants are quite attractive with their odd reddish-green leaves, strict habit and bright-eyed flowers.

The specific name *Mohavensis* I have chosen in order to publish more extensively the peculiar region where this novelty is found. The Mohave valley is noted for many rare forms including the types of four as yet monotypic and local genera—Mohavea, Canbya, Lemmonia and Parishella—while it is the headquarters of several other odd genera of wider latitude, such as Monoptilon, Trichoptilium, Tricardia, Hesperocallis and Nicolletia, the latter, however, having a second species outside.

In this connection it may be well to report the names and localities of a few of the new species discovered during the same trip, and mostly in the same valley.

Astragalus Mohavensis, Watson, is a large, woolly species found near Newberry's station.

Astragalus acutirostris, Watson, is a slender, glabrous form in the splintered rocks above Calico mines.

Senecio Mohavensis, Gray, is a curious annual in clefts of rocks near Fort Mohave.

Phacelia invenusta, Gray, resembles *P. crenulata*, in Nevada basin near Fort Mohave. (First collected in 1880 but now recollected and just named.)

Phacelia saxicola, Gray, a delicate, tufted species, in clefts of moist granite rocks near Kingman, Ariz.

Nama depressum, Gray, forms small circular mats on the plains near Calico village.

Nama pusillum, Gray, a tiny, depressed form on gravel tables, between Waterman and Calico.

Also we find here, in a noted cañon of ancient cliff-dwellings near San Francisco Mountains, a large *Cystopteris*, uniformly bearing bulblets near the apex of the fronds. If this is the species *C. bulbifera* it has not before been reported so far west as Arizona.

Fort Moroni, near Flagstaff, Ariz., July 30, 1884.

On the Sexuality of the Fungi.[1]

BY H. MARSHALL WARD.

I propose to show that it is probable that the sexuality of the higher Fungi has disappeared, because its purpose has been equally well or better attained otherwise than by means of sexual organs.

Preliminary to this it will be necessary to be quite clear as to what sexual organs and the sexual process essentially are.

The two points common to all the cases of sexual reproduction which have been directly observed are the following:

1. A larger or smaller quantity of protoplasmic material passes from one portion (the male organ) of the same or another individual, into the protoplasm contained in another portion (the female organ).

2. The protoplasm contained in the female organ therefore becomes capable of further development; either at once, or, more generally, after undergoing a period of rest.

It is not necessary to quote the numerous cases of observed analogies between the sexual reproduction of animals and plants; but will suffice to note that the essential in the sexual process is always the addition of a portion of protoplasm from the male, to the protoplasm of the female.

But this is not all. It is now well established in embryology that the normal ovum, or female mass of protoplasm, is incapable of further development until it has received the protoplasm of the male; that the latter, in fact, incites the former to further development.

The outcome of all we know of these matters leads to the conviction that we have in the germination or development of an

[1] The statement of the important hypothesis hereby presented is somewhat abbreviated from the concluding portion of a long and interesting article by Professor Ward, given under the same title. The review of the historic progress of our knowledge of sexuality in fungi, and the present state of such knowledge, with the numerous illustrative diagrams are necessarily omitted for want of space.—EDS.